

IN THE CLAIMS:

1. (Original) An optical communication system to extend a range or data communications comprising:
 - a mobile communication device;
 - an output buffer;
 - an optical transmitter associated with the device;wherein the transmitter transmits optical data comprising a message bit that is represented by a plurality of optical transmission pulses for each bit in the output buffer.

2. (Original) The optical communication system of claim 1, wherein the plurality of optical transmission pulses are identical for each bit in the output buffer.

3. (Original) An apparatus to extend a range of infrared data communication, the apparatus comprising:
 - a device for receiving user inputs; and
 - an infrared transmitter associated with the device, wherein the transmitter transmits infrared data as signals wherein a bit of infrared data is represented by a plurality of identical pulses.

4. (Original) The apparatus as defined in claim 3, wherein the device for receiving user inputs comprises pre-existing unmodified hardware devices selected from the group of pre-existing unmodified hardware devices of: a personal data assistant, a 3Com Palm Pilot compatible device, and a Windows CE based device.

5. (Original) The apparatus as defined in claim 3, further comprising a display for displaying a visual representation of incoming signal strength.

6. (Original) The apparatus as defined in claim 3, wherein the incoming signal strength is measured through the use of an incoming synchronization header.

7. (Original) The apparatus as defined in claim 3, wherein the incoming signal strength is measured through a summation of received pulses.

8. (Original) The apparatus as defined in claim 3, wherein the incoming signal strength is measured through graduation of the pulse width and therefore the energy of a synchronizing signal.

9. (Original) The method as defined in claim 3, wherein the apparatus further comprises an infrared receiver for receiving incoming signals from a stationary object wherein the infrared receiver and infrared transmitter comprise a transceiver for asymmetric communication for slow transmission and fast reception of information.

10-19 (Cancelled)

20. (Original) A method for extending a range of infrared data communication between a user device and another object, the method on the user device comprising the steps of:

receiving user inputs on a user device; and
transmitting infrared data as signals from an infrared transmitter associated with the device, wherein a bit of infrared data is represented by a plurality of identical pulses.

21. (Original) The method as defined in claim 20, wherein the step of receiving user inputs includes receiving user inputs on a user device comprising user pre-existing unmodified hardware devices selected from the group of user pre-existing unmodified hardware devices of: a personal data assistant, a 3Com Palm Pilot compatible device, and a Windows CE based device.

22. (Original) The method as defined in claim 20, further comprising the programming instruction of:

displaying a visual representation of incoming signal strength on a display associated with the user device.

23. (Original) A computer readable medium containing programming instructions for extending a range of infrared data communication between a user device and another object, the method on the user device, the computer readable medium comprising the programming instructions of:

receiving user inputs on the user device; and

transmitting infrared data as signals from an infrared transmitter associated with the device, wherein a bit of infrared data is represented by a plurality of identical pulses.

24. (Original) The computer readable medium as defined in claim 23, wherein the programming instruction of receiving user inputs includes receiving user inputs on a user device comprising user pre-existing unmodified hardware devices selected from the group of user pre-existing unmodified hardware devices of: a personal data assistant, a 3Com Palm Pilot compatible device, and a Windows CE based device.

25. (Original) The computer readable medium as defined in claim 23, further comprising the programming instruction of:

displaying a visual representation of incoming signal strength on a display associated with the user device.